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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,570	02/11/2002	Akira Okawa	FUJI 19.420	5131

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EXAMINER	
QURESHI, AFSAR M	
ART UNIT	**PAPER NUMBER**
2616	
MAIL DATE	**DELIVERY MODE**
07/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/073,570	OKAWA ET AL.	
	Examiner	Art Unit	
	Afsar M. Qureshi	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Q, Q

Response to Amendment

1. This action is responsive to amendment/remarks received on 5/31/2007. Applicant cancelled claims 7 and 8. Claims 1-6 remain in the application.

Response to Arguments

2. Applicant's arguments filed on 5/31/2007 have been fully considered but they are not persuasive. Applicant maintains that the cited reference, Kim (US 6,151,334) fails to disclose all the limitations and arrangement of the features of claim 1. Especially, Kim does not disclose that multiplexer 48 receiving a signal from the unit 24 (page 10).

Examiner, respectfully, disagrees and contends that Kim's reference anticipates all the limitations as broadly interpreted. The removing unit 24 (figure 11) has an extracting part (de-multiplexer 74). It will be apparent from figures 18A and 18B that Kim's reference teaches a *bidirectional* communication system using multiple removing units feeding into multiplexer (see col. 19, lines 34-45). Further the output of buffer 124 (fig. 11) is coupled to and feeding into input of multiplexer (see col. 16, lines 14-37).

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kim (US 6,151,334).

Considering claim 1, Kim discloses plurality of input interfaces for input signals and a multiplexer 48 (see figures 2 and 3). Kim further discloses a device for processing data signals comprising: a storing part storing an input signal (column 2, lines 40-41), an extracting part extracting said data signals included in said input signals from said storing part (column 2, lines 56-58) and outputting said data signals at a desired output speed (column 2, lines 29-30, where providing high speed data transfer inherently means outputting at a desired speed, also, se col. 16, lines 14-37), and wherein said extracting part outputs said data signals based on storage information indicating an amount of data (control characters) of said input signal (column 2, lines 63-66).
It should be noted that this device as taught by the applicant could be considered a common de-multiplexer. A de-multiplexer stores incoming data (storing part) and extracts specific parts of the data based on "storage information," just as applicant's device claims.

Kim further discloses that a signal is output stating buffer state (see col. 18, lines 59 through col. 19, lines 1-25).

5. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Brown (US 6,721,295)

Kim has the device of claim 1 with a storing part but does not disclose what the storing part includes. Brown teaches a system for high data communication systems that uses three memory parts, or buffers (Figure 5) where data, and thus input, is stored (as is the purpose of a memory buffer). In Brown, the third memory buffer is used for signaling information (or storage information, as loosely recited by the applicant). In

view of the broad limitations as set forth by the applicant, the third memory buffer can be the "second memory part" of applicant's claim (and thus Brown's first and second memory buffers are now applicant's first and third memory parts). It would have been obvious to one skilled in the art at the time of the invention to include in Kim's data processing device the storing part of Brown in order to minimize or even reduce computational complexity and hardware requirements (column 1, lines 36-39).

6. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Matsunaga (US 6,504,855)

Considering claims 3 and 4, Kim has a device for processing data signals as described in claim 1. As mentioned in the rejection of claim 1, applicant's language describes a de-multiplexer, a device Kim similarly teaches. Kim discloses that if there are no data words (empty release) the scheduler sends a control signal (see col. 8, lines 26-28). Kim, however, does not teach the method of dealing with input and output signals of varying speeds. Matsunaga, in the same field of endeavor, discloses a device where the extracting part (encoder) outputs data signals in which an invalid data signal is inserted/included to/in the input signal (column 2, lines 38-44 and column 6, lines 35-46). It would thus have been obvious to one skilled in the art at the time of the invention to use Kim's de-multiplexer in Matsunaga's device for extracting including data signals to be processed by the encoder and buffer.

Considering claim 5, as discussed above, Matsunaga's device is able to recognize valid vs. invalid data. Inherently, a monitoring part must exist in order to make this

distinction. Furthermore, as taught by the applicant, a data determining part gives a determination notice to input invalid data. Therefore, as loosely recited by the applicant, the encoders of Matsunaga have a data determining part that serves the same function of deciding to input invalid data. It is thus obvious to one skilled in the art that Matsunaga's device also comprises a monitoring part monitoring said data signals (determination of validity of data bytes), a data determining part determining said data signals based on a notice of said storage validity of said data signals from said monitoring part, an invalid data generating part generating invalid data to insert into said data signal, whereas said invalid data generating part inserts said invalid data to said input signal in response to a determination notice from said data determining part (column 2, lines 38-44).

7. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Knapp (US 6,874,048).

Kim has the device of claim 1 with an extracting part but does not disclose what the extracting part comprises. Knapp teaches a method and device in a communication system for sending data that supports multiple forms of data (column 2, lines 34-35). Knapp further discloses a device and method in which a NO DATA command is used where the controller will ignore the data received (column 15, line 59-60). Inherently, by ignoring data so that it is not processed, the same function is achieved as applicant's deletion of no-data codes. Therefore, a device is disclosed which comprises a monitoring part monitoring data signals (controller), a no-data code determining part

(controller) determining a no-data code and a deleting part (or ignoring part) deleting said no-data code included in said data signal. It would have been obvious to one skilled in the art at the of the invention to include in Kim's data processing device the device of Knapp so as to allow for a better and more flexible communications system capable of supporting multiple forms of streaming and non-streaming data.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afsar M. Qureshi whose telephone number is (571) 272 3178.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Field Lynn can be reached on (571) 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AFSAR QURESHI
PRIMARY EXAMINER

7/17/2007